

Amendments to the Drawings

Figures 2A, 2B and 7 were amended to provide dashed boxes around
50 structures 42, 42', and 52 to distinguish from the entire structure referred to
by reference numeral 10. Two replacement sheets are included with this
response.

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REMARKS

The title, abstract, and Figures were amended as required by the Office Action.

Claims 25-28, 31, and 36 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,188,983 (Guckel). Claims 1 and 2 were rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,606,913 (Gian) in view of Guckel. Claims 3-23 and 8-24 are rejected under 35 U.S.C. § 103(a) as being obvious over Gian in view of Guckel and U.S. Patent No. 5,583,290 (Lewis). Claims 35 and 37-41 stand rejected under 35 U.S.C. § 103(a) as being obvious over Guckel in view of Lewis. Claims 13, 14, and 30 were determined to be allowable if presented in independent form.

Claims 15-17 were rejected in the Office Action as indicated above, but no specific reasons were provided. Because claims 15-17 depend from allowed claim 14, Applicants assume claims 15-17 were also intended to be designated as being allowable.

Claims 30-41 were renumbered as 29-40 to compensate for a gap in claim numbering. The claims are herein referred to by their amended numbers.

Claims 3 and 21-23 were cancelled. Claim 41 was added. Claims 4-6, which had depended from claim 3, were amended to depend from claim 1. Claims 9-12 had incorrectly depended from claim 6, and were amended to correctly depend from claim 8. Allowable claims 13, 14, and 29 were rewritten in independent form. Claim 15 was amended to correct a typographical error. Claim 26-28 were amended to correct typographical errors in the claim dependency.

Independent claims 1 and 25, as amended, include the general feature of a strain gauge having an actuator connected to a beam to apply a force to the beam and a detector connected to the beam to measure a frequency of vibration of the beam. The actuator is electrically isolated from the detector.

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None of the cited art teaches or suggests having an actuator and a detector coupled to a beam and being electrically isolated from one another (see the insulating bridge 33 of Figures 2-4 and 7). The insulator isolates the detector from voltages originating at the actuator that might otherwise travel along the beam. Guckel and Lewis both energize capacitors that are not connected to the beam to move the beam indirectly. Neither teaches an actuator and detector coupled to the beam, much less an insulator between the actuator and the detector. Hence, claims 1, 25, and all claims depending therefrom, are allowable. Applicants respectfully request these claims be allowed.

Claim 30 has been amended to include similar features as allowable claim 14. Namely, a microprocessor is provided to determine strain as a function of the detected resonant frequency of the arm. Hence, claim 30, and all claims depending therefrom, are allowable for at least the reasons stated by the Office Action in allowing claim 14. Applicants respectfully request these claims be allowed.

In view of the remarks set forth herein, the application is believed to be in condition for allowance and notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the examiner is requested to contact the undersigned attorney with any questions, comments or suggestions relating to the referenced patent application.

This response includes a petition for extension of time for one month, thereby extending the period for response to August 5, 2005. In addition a fee of 650 is believed due to the addition of three independent claims and one additional claim. The Commissioner is authorized to charge such fees, or any other fees required under 37 C.F.R. § 1.17 that may be due on this application, to Deposit Account 17-0055. The Commissioner is also authorized to treat this amendment and any future reply in this matter requiring a petition for an extension of time as incorporating a petition for extension of time for the appropriate length of time as provided by 37 C.F.R. § 136(a)(3).

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Respectfully submitted,

Keith M. Baxter
Quarles & Brady, LLP
Reg. No. 31,233
Attorney for Applicant
411 East Wisconsin Avenue
Milwaukee WI 53202
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